

Improved Integrated Circuit Burn-In Methods and Apparatus

Abstract of the Disclosure

Improved methods for performing burn-in of electronic components, such as integrated circuits (ICs) with on-board thermal sense circuits, are used to obtain a higher bin split. According to one embodiment, a thermal set-point is loaded into each IC. While the ICs are maintained at a constant elevated temperature, the burn-in system checks each IC to determine whether the set-point has been exceeded. If so, it characterizes the IC by that set-point; if not, it decrements the set-point and checks again. The method continues until all ICs have been characterized to a specific set-point. As a result of the method, a junction temperature is obtained for each IC. In addition, a real-time estimate of the burn-in time for each IC is obtained, so that burn-in time can be adjusted to maximize burn-in throughput. Apparatus for implementing improved IC burn-in is also described.

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